

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-19 (Cancelled).

Claim 20 (Previously Presented): A continuously operated process for the purification by distilling a crude oxirane formed in an oxirane synthesis by reacting a hydroperoxide with an organic compound, the process comprising

separating the crude oxirane by distilling in a dividing wall column into low-, intermediate- and high-boiling fractions, and

taking off purified oxirane as the intermediate boiler fraction at a side offtake, wherein the dividing wall column has from 30 to 120 theoretical plates,

wherein the distillation is carried out at a temperature from 35 to 110°C and a pressure from 1 to 10 bar, with the temperature being measured at the side offtake and the pressure being measured at the top of the column,

and wherein the dividing wall column is configured as thermally coupled columns.

Claim 21 (Previously Presented): The process as claimed in claim 20, wherein no impurity is present in the purified oxirane in a concentration of above 0.1% by weight, or the sum of all impurities is not greater than 0.1% by weight.

Claim 22 (Cancelled).

Claim 23 (Previously Presented): The process as claimed in claim 20, wherein the crude oxirane is prepared by a process comprising at least the steps (i) to (iii):

(i) reacting the hydroperoxide with the organic compound to give a product mixture comprising the reacted organic compound and unreacted hydroperoxide,

(ii) separating the unreacted hydroperoxide from the mixture resulting from step (i),
and

(iii) reacting the hydroperoxide which has been separated off in step (ii) with the organic compound,

wherein an isothermal fixed-bed reactor is used in step (i), an adiabatic fixed-bed reactor is used in step (iii) and a separation apparatus is used in step (ii), and

wherein the hydroperoxide is hydrogen peroxide,

wherein the organic compound is propylene,

wherein the reaction occurs over a heterogeneous catalyst to form propylene oxide as oxirane, and

wherein the heterogeneous catalyst is a titanium containing silicalite TS-1.

Claim 24 (Previously Presented): The process as claimed in claim 23, wherein no impurity is present in the purified oxirane in a concentration of above 0.1% by weight, or the sum of all impurities is not greater than 0.1% by weight.

Claims 25 -29 (Cancelled).